Amendments to the Claims

Please amend page 10, line 1 as follows:

~~Claims~~ **What is claimed is:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method ~~Method~~ for determining *in vivo* protein activity comprising

a) hyperpolarising the NMR active nuclei of samples collected from a human or non-human animate body preadministered with at least one probe compound containing at least one NMR active nuclei; and

b) analysing said samples by NMR spectroscopy

2. (Currently amended) The method ~~Method~~ according to claim 1, wherein ~~from~~ said analysing ~~analysis of~~ step b) further comprises the step of generating an NMR pattern I, wherein said generating step further ~~is generated, the method~~ comprises the ~~further~~ steps of

c) hyperpolarising the NMR active nuclei of samples collected from a human or non-human animate body preadministered with said at least one probe compound and at least one putative drug,

d) analysing said samples by NMR spectroscopy and hereby generating an NMR pattern II,

e) comparing the NMR patterns I and II thus identifying distinctions in the NMR pattern II, which are due to the administration of the putative drug.

3. (Currently amended) The method ~~Method~~ according to ~~claims 1 to 2~~ claim 1, wherein at least two probe compounds are selected.

4. (Currently amended) The method ~~Method~~ according to ~~claims 1 to 3~~ claim 1, wherein the probe compounds are enriched with NMR active nuclei.

5. (Currently amended) The method ~~Method~~ according to ~~claims 1 to 4~~ claim 1, wherein said hyperpolarising step ~~hyperpolarisation~~ is carried out by one of means of polarisation transfer from a noble gas, brute force, dynamic nuclear polarisation (DNP) and ~~or~~ spin refrigeration.

6. (Currently amended) The method ~~Method~~ according to ~~claims 1 to 5~~ claim 1, wherein the collected samples are biofluids.

7. (Currently amended) The method ~~Method~~ according to ~~claims 1 to 6~~ claim 1, wherein said probe compounds are substrates, inducers or inhibitors for Cytochrome P 450 (CYP450)

8. (Currently amended) The method ~~Method~~ according to claim 7, wherein said probe compounds are substrates, inducers or inhibitors for CYP 450 isoenzymes selected from the group consisting of CYP1A2, CYP2A6, CYP2C8/9, CYP2C19, CYP2D6, CYP2E1 and CYP3A4.

9. (Currently amended) The method ~~Method~~ according to ~~claims 1 to 8~~ claim 1, further comprising the step of ~~for~~ phenotyping

10. (Currently amended) The method ~~Method~~ according to ~~claims 2 to 8~~ claim 2, further comprising the step of ~~for~~ studying drug-drug interaction.

11. (Currently amended) A mixture ~~Mixture~~ comprising at least two probe compounds, all probe compounds being enriched with at least one of ^{13}C- and ~~and/or~~ ^{15}N NMR active nuclei.

12. (Currently amended) The mixture ~~Mixture~~ according to claim 11, wherein said mixture comprises at least 3 probe compounds, preferably at least 4 probe compounds.

13. (Currently amended) The mixture ~~Mixture~~ according to ~~claims 11 to 12~~ claim 11, wherein said probe compounds are probe compounds that interact with proteins selected from the group consisting of NADPH quinone oxireductases, CYP450, N-acetyltransferase, glutathione transferase, thiomethyltransferase, thiopurine methyltransferase, sulfotransferase, UDP-glucuronosyl transferase, pseudocholinesterase, serotonin transport protein, ATP binding cassette (ABC's) and p-glycoprotein.

14. (Currently amended) The mixture ~~Mixture~~ according to ~~claims 11 to 13~~ claim 11, wherein the mixture comprises probe compounds selected from the group consisting of phenacetin, coumarin, tolbutamide, phenytoin, mephenytoin, S-mephenytoin, bufuralol, chlorzoxazone, midazolam, caffeine, dapsone, diclofenac, debrisoquine, bupropion, antipyrine, dextromethorphan, warfarin, diazepam, alprazolam, triazolam, flurazepam, chlodiazepoxide theophylline, phenobarbital propranolol, metoprolol, labetalol, nifedipine, digitoxin, quinidine, mexiletine, lidocaine, imipramine, flurbiprofen, omeprazole, terfenadine, furafylline, codeine, nicotine, sparteine, erythromycin, benzoylcholine, butrylcholine, paraoxon, para-aminosalicylic acid, isoniazid, sulfamethazine, 5-fluorouracil, trans-stilbene oxide, D-penicillamine, captopril, ipomeanol, cyclophosphamide, halothane, zidovudine, testosterone, acetaminophen, hexobarbital, carbamazepine, cortisol, oltipraz, cyclosporin A and paclitaxel.

15. (Currently amended) The mixture ~~Mixture~~ according to ~~claims 11 to 13~~ claim 11, wherein the mixture comprises probe compounds selected from the group consisting of sulfathiazole, dapsone, isoniazid, sulfamethoxazole, hydrazaline, caffeine and procainamide.

16. (Currently amended) The mixture ~~Mixture~~ according to ~~claims 11 to 13~~ claim 11, wherein the mixture comprises probe compounds selected from the group consisting of phenobarbital, oltipraz and 3-methyl-cholanthrene.

17. (Currently amended) The mixture ~~Mixture~~ according to ~~claims 11 to 13~~ claim 11, wherein the mixture comprises probe compounds selected from the group consisting of azathioprine, mercaptopurine and thioguanine.

18. (Currently amended) The mixture ~~Mixture~~ according to ~~claims 11 to 17~~ claim 11, wherein the mixture further comprises at least one putative drug.

19. (Currently amended) Use of the mixture according to ~~claims 11 to 17~~ claim 11, for the determination of in vivo protein activity, preferably for phenotyping.

20. (Original) Use of the mixture according to claim 18 for studying drug-drug interaction.

21. (Currently amended) An agent for determining *in vivo* protein activity comprising a mixture ~~Mixture~~ comprising at least two probe compounds, all probe compounds being enriched with at least one of ^{13}C and ~~and/or~~ ^{15}N NMR active nuclei~~, for use as an agent for determining *in vivo* protein activity~~.

22. (Currently amended) An agent for determining in vivo protein activity comprising a mixture ~~Mixture~~ comprising at least two probe compounds, all probe compounds being enriched with at least one of ^{13}C and ~~and/or~~ ^{15}N NMR active nuclei, for the manufacture of an agent for determining *in vivo* protein activity.

23. (Currently amended) The mixture ~~Mixture~~ according to ~~claims 21 to 22~~ claim 21, wherein the mixture further comprises at least one putative drug.